

REMARKS

Claims 13-15 are pending and rejected in the present application. Claims 13 and 15 are amended hereby.

Applicants acknowledge and appreciate the Advisory Action mailed 17 February 2004 in which the Examiner indicated the Amendment / Response to
5 Final mailed 23 January 2004 has been entered and that the prior rejection of claim 15 under 35 U.S.C. 112 has been withdrawn.

This Amendment is submitted contemporaneously with a Request for Continued Examination. In light thereof, Applicants respectfully request the finality of the prior Office Action and of the rejections made therein be withdrawn.

10 In the Final Office Action, claim 13 was finally rejected under 35 U.S.C. §102(b) as being anticipated by any one of U.S. Patent Nos. 5,533,540, 5,427,622 and 5,579,792 (collectively referred to hereinafter as the Stanaslovich patents).

15 Claim 13 has been amended hereby to recite in part "moving the wafers in the cleaning fluid through said megasonic waves in a direction that is generally perpendicular to the direction of travel of the megasonic waves and generally perpendicular to the wave fronts of the megasonic waves". (*Emphasis Added*). Applicants submit that the cited references fail to disclose or suggest such a limitation.

In the Advisory Action the Examiner indicated with respect to claim 13 that the difference between the prior art and the method of the present invention appeared to be the direction in which the wafers are moved. The Examiner is generally correct.

5 More particularly, the Examiner stated

10 “[i]t appears that what is different in the prior art and the method of the invention is a direction of the movement of the wafers relative to themselves. The wafers in the prior art are moving parallel to their face surface, while in the method of the invention they are moving perpendicular [to] their surface. However, such concept was not presented in the claims and considered.”

(*Emphasis Added*). Applicants submit, however, that the difference between the prior art and the method of the present invention is the direction of movement of
15 the wafers relative to the megasonic waves, not relative to the wafers themselves.

Generally, the devices of the Stanaslovich patents translate a given wafer in a direction that is either parallel to the direction of travel of the wave (and thereby perpendicular to the wave front) or parallel to the wave front (and thereby
20 perpendicular to the direction of travel of the wave). In contrast, the present invention moves the wafers in a direction that is perpendicular to the direction of travel of the waves and perpendicular to the wave front. The wafers are thereby translated through more than one megasonic wave.

More particularly, the device shown in Fig. 1 of the Stanaslovich patents generates megasonic waves that travel in a generally upward direction from the bottom of the tank toward the surface of the cleaning fluid, and which have wave fronts that are generally parallel to the bottom of tank. The wafers are moved in
5 a direction that is generally perpendicular to the direction of travel of the waves but is generally parallel to the wave fronts. Thus, the device shown in Fig. 1 of the Stanaslovic patents does not move the wafers in a direction that is generally perpendicular to the direction of travel of the waves and generally perpendicular to the wave front, as recited in part by amended claim 13.

10 The devices shown in Figs. 2-4a of the Stanaslovich patents generate megasonic waves that travel in a direction generally from the left toward the right side of the tank, and which have wave fronts that are generally parallel to the sides of the tank. The wafers are moved in a direction that is generally perpendicular to the wave front but is generally parallel to the direction of travel
15 of the waves. Thus, the device shown in Figs. 2-4A of the Stanaslovic patents does not move the wafers in a direction that is generally perpendicular to the direction of travel of the waves and generally perpendicular to the wave front, as recited in part by amended claim 13.

For the foregoing reasons, Applicants submit that the Stanaslovich patents
20 fail to disclose moving wafers in a direction that is perpendicular to the direction of travel of the waves and perpendicular to the wave front, as recited in part by

amended claim 13. Accordingly, Applicants submit that claim 13 and claim 14 depending therefrom are now in condition for allowance and respectfully request same.

In the Final Office Action, claim 15 was also rejected under 35 U.S.C. §102(b) as being anticipated by any one of the Stanaslovich patents. In the Office Action, the Examiner notes that the claim is silent regarding the specific way in which the waves are intercepted and the degree of dispersion, for which courtesy the Examiner is thanked.

Applicants have amended claim 15 to recite in part “intercepting the generated waves inside the container at a location between one or more sources of the megasonic waves and the holder, and dispersing the waves in a divergent manner” and “exposing the semiconductor wafers to the dispersed megasonic waves within the cleaning fluid”. (*Emphasis Added*). Thus, Applicants submit that claim 15 now more particularly recites the specific way in which the waves are intercepted and/or dispersed. Accordingly, Applicants submit that the cited references fail to disclose or suggest such limitations, and therefore do not anticipate the claim.

Claim 27 has been added hereby to further protect the patentable subject matter of the present invention. Claim 27 recites in part “moving the wafers in the cleaning fluid through said megasonic waves in a direction that is generally transverse to the megasonic waves and generally perpendicular to faces of the

wafers." (*Emphasis Added*). Applicants submit that the cited references fail to disclose or suggest such a limitation. Accordingly, Applicants submit that claim 27 is in condition for allowance, which is hereby respectfully requested.

For all the foregoing reasons, Applicants submit that the pending claims
5 are definite and do particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Moreover, Applicants submit that the pending claims are also in condition for allowance. Accordingly, Applicants respectfully request withdrawal of all objections and rejections, and allowance of the claims.

10 The Examiner is invited to telephone the undersigned in regard to this Amendment and the above identified application.

Respectfully submitted,

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